

# Abbreviated Preliminary Assessment Report

**CW Processing Company** 

CERCLIS ID No. IAN000706171

By: Brian Mitchell, EPA Region 7 Nebraska Site Assessment Manager

#### **Site Location**

The CW Processing Company site, CERCLIS Site Identification Number IAN000706171, is located at 5051 Williams Boulevard SW, Cedar Rapids, Iowa 52404.

#### Site Description

Wayne Manufacturing used to conduct plating operations at this facility prior to being occupied by CW Processing Company.

#### **Potential Problem**

A Phase 2 Site Investigation was conducted at the site. The Phase 2 Site Investigation Report is dated March 30, 2005. The Phase 2 Site Investigation showed that cyanides had been released to the soil and groundwater at the CW Processing Company site. On July 15, 2010, Cynthia Hutchison, with the EPA Region 7 RCRA Program, asked that the CERCLA Site Assessment Program sample down-gradient private water supply wells to determine if any of the private water supply wells had been impacted.

#### Abbreviated Preliminary Assessment Sampling Activities

Below is a Google Earth Map which identifies the CW Processing Company site, the 9 private water supply wells which were sampled by EPA during the week of July 19, 2010, and the direction of groundwater flow for the area as identified by the blue arrow. The distance from the CW Processing Company site to private water supply well 7 is approximately 34 of a mile.

Private water supply well 1 belongs to:

4551 33<sup>rd</sup> Avenue SW Cedar Rapids, Iowa 52404

The house has been empty for 2 years and is a rental home.

Private water supply well 2 belongs to:

4531 33<sup>rd</sup> Avenue SW Cedar Rapids, Iowa 52404

The house has a reverse osmosis system installed for drinking purposes.

Private water supply well 3 belongs to:

4501 33<sup>rd</sup> Avenue SW Cedar Rapids, Iowa 52404

Well depth...approx 350 feet.
Well drilled...approx 1963.
The house has a reverse osmosis system installed for drinking purposes.

Private water supply well 4 belongs to:

4471 33<sup>rd</sup> Avenue SW Cedar Rapids, IA 52404

> Well depth: 220ft Well drilled: 1993

The house has no treatment system
The owners drink bottled water

Private water supply well 5 belongs to:

4401 33<sup>rd</sup> Ave SW Cedar Rapids, IA 52404

Private water supply well 6 belongs to:

3980 West Post Road SW Cedar Rapids, IA 52404

Well depth: 300ft

Well drilled: 1960 (approx.)

The house has reverse osmosis and an iron filter for drinking purposes.

Private water supply well 7 belongs to:

5257 Beverly Road SW Cedar Rapids, IA

Well depth: 470ft

The house has no reverse osmosis inside

The house has water softener.

Private water supply well 8 belongs to:

3750 West Post Road SW Cedar Rapids, IA 52404

> Well depth: 318ft Well drilled: 1962

The house uses water softener.

Private water supply well 9 belongs to:

3800 West Post Road SW Cedar Rapids, IA 52404

This house has a sandpoint well with a depth of 100ft

The owner drinks bottled water



Attached are copies of the sample collection field sheets, the analytical results, and the chain-of-custody record.

#### Conclusions

None of the private water supply wells sampled have been impacted by the release at the CW Processing Company site. No further action under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authority is warranted at this time. Cynthia Hutchison, with the EPA Region 7 RCRA Program, shall retain clean-up lead at this site.

ASR Number: 4	997 Sample Number:				Tag ID: 4997-1
Project ID: Project Desc: City: Program:		F	Assessment	ager: Brian Mito State: Iowa Site ID:	07ZZ <b>Site OU:</b> 00
Location Desc:	Outside Stringer Sp	external Sa	mple Numb	er:	
Expected Conc Latitude: Longitude:			um High)	Date Start: 7/20/1 End: 7/20/1	***
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Sample Comm	ents:				

(N/A)

4501 33rd Ave 5W

Leder Rapids, IA 52404-3129

Well depth: 300 to 400 Orilled: 1968

Project ID: BM	1CWDWSA			ject Manager:	Brian Mitchell	
Project Desc: CV	V Processing DW supply	y wells -	Site As	sessment	_	
5 miles (10 miles 10	dar Rapids			State:	Iowa	
Program: Su					a:	Cit- Oll- 00
Site Name: Mu	ılti-Site - General				Site ID: 07ZZ	Site OU: 00
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Lucation Desc. 3	'N' .					
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Latitude: Longitude: Laboratory Analy Container 1 - 1 Liter Cubitainer	/Ses: Preservative Field Filtered, HNO3 to pH<2	Samp	ole Coll	ection: Start: End:	7 /20 / Lo	15 30
Latitude: Longitude: Laboratory Analy Container 1 - 1 Liter Cubitainer	/ses: Preservative Field Filtered, HNO3 to	Samp Holding	Time	End:  Analysis  1 Metals - Dissol	7 /20 / Lo	15 30
Latitude: Longitude: Laboratory Analy Container 1 - 1 Liter Cubitainer	/Ses: Preservative Field Filtered, HNO3 to pH<2 HNO3 to pH<2	Samp Holding 180	Time Days Days	Analysis  1 Metals - Dissol  1 Metals in Wate  1 Cyanide, Total	7 /20 / Lo	<b>IS</b> : <b>30</b> P/MS

4501 33rd Ave SW Cedar Rapids, IA 52404-3129

Well Depth: 300 to 400

Drilled: 1962

ASR Number: 4	997 Sample Number	: 3	QC Co	de: Ma	trix: Water Tag	ID: 4997-3
Project ID:	BMCWDWSA	82			er: Brian Mitchell	
Project Desc: (	CW Processing DW suppl	y wells -	Site As	sessment		
City: 0	Cedar Rapids			Stat	e: Iowa	
Program: 5	Superfund				1 1	El monardo establista promoner
Site Name:	Multi-Site - General				Site ID: 07ZZ	Site OU: 00
Location Desc:	Outside spigot	prior	- 10	RO syst	rem	. 192
1	-	•		ole Number:		
Expected Conc:	(or Circle One	: (Low)	Medium	High)	Date	Time(24 hr)
Latitude:		Samp	ole Coll	ection: Star	t: 7/20/10	16:30
Longitude:		,		Enc		16:30
Laboratory Ana	lyses:					
Container	Preservative	Holding	Time	Analysis		
1 - 1 Liter Cubitainer	Field Filtered, HNO3 to pH<2	180	Days	1 Metals - Dis	solved, in Water by ICP	P/MS
1 - 1 Liter Cubitainer	HNO3 to pH<2	180	Days	1 Metals in W	ater by ICP/MS	100
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide, To	tal in Water	* *
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide, To	tal - Dissolved in Water	·
Sample Commer	nts:	2				
(N/A)	9					

4531 33.d. Ave SW Cedar Rapids, IA SZ404-3129

Well Roth: Un Known

Prilled: Unknown

Sample Collected By: BM

: a . . . .

Project ID: BM	ICWDWSA V Processing DW suppl	v wells -		ject Manager sessment	: Brian Mitchell	•
	dar Rapids	,		State	: Iowa	
Program: Su Site Name: Mu	perfund Ilti-Site - General		, 100 St.		Site ID: 07ZZ	Site OU: 00
Location Desc:	After reverse os	mosis	(insid	e home)		
		Externa	al Samp	le Number:		
Expected Conc:	(or Circle One:	· (low)	Medium	High)	Date	Time(24 hr)
Latitude: _		Sami	ole Coll	ection: Start:	2 /20/10	16:30
Longitude: _				, End:	7_/20/16	16:30
Laboratory Analy						
Container  1 - 1 Liter Cubitainer	Preservative Field Filtered, HNO3 to	Holding 180	Days	Analysis  1 Metals - Disso	lved, in Water by ICP,	/MS
12-11 Liter Cubitainer	pH<2 HNO3 to pH<2	180	Days'	1 Metals in Wate		
1 - 1 Liter Cubitainer	NaOH to pH > 12	14	Days	1 Cyanide, Total		
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days		- Dissolved in Water	747
Sample Comments	s:					
(N/A)						Sea Viscoli
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4 - 1						
4531	33rd Ave SV	V				
	Rapido, IA	80				
Code	/ Rail TA	C	(	3		

Well Dopth: Unknown

Prilled: Unknown

	CWDWSA				: Brian Mitchell		
	Processing DW suppl	y wells -	Site Asses		: Iowa		
	ar Rapids erfund	3		State	. 10114	3.1	
Site Name: Mult				9	<b>Site ID:</b> 07ZZ	Site Ol	1: 00
Location Desc: 0	utside spiget	<u>)                                    </u>	corto.	treatme	at		Ni
ol 1		Externa	l Sample	Number:			
Expected Conc:	(or Circle One:	Cow	Medium H	igh)	Date 21 86M	Time(	24 hr
Latitude:		Samp	le Collect	ion: Start:	7/28/10	16.3	16-
Longitude:				End:	7 /26/10 2\ BGM	B61	16
Laboratory Analys	es: Preservative	Holding	Time	Analysis		3	
L - 1 Liter Cubitainer	Field Filtered, HNO3 to	180			lved, in Water by IC	P/MS	
	pH<2	180	Days 1	Metals in Wat	er by ICP/MS		
L - 1 Liter Cubitainer L - 1 Liter Cubitainer	HNO3 to pH<2 NaOH to pH >12	14		Cyanide, Tota		(4)	
1 - 1 Liter Cubitainer	NaOH to pH >12	14	NAME AND ADDRESS OF THE PARTY O		I - Dissolved in Wate	<b>≙</b> r	
Sample Comments:	-				10	- 1	3
(N/A) .				8		14. V	i i i i i i
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1655 (455) Cedar	33rd Ave Napos, IA s	> 00	1				
			1				4 353

Well Repth: unknown

Drilled: un known

Project ID: BN						Brian Mitchell	
	V Processing DW supply	y wells -	Site A				
	dar Rapids			100	State:	Iowa	
	perfund	40 N				Cit - TD - 0777	Cit- 011- 00
Site Name: Mu	ılti-Site - General					Site ID: 07ZZ	Site OU: 00
Location Desc:	Justide spigot						
	ر .	Externa	ıl Sam	ple Numi	ber: _		
Expected Conc:	(or Circle One:	Yow	Medium	High)		Date	Time(24 h
Latitude: _		Samp	ole Col	lection: 9	Start:	7/20/10	17:00
Longitude: _					End:	2/20/10	13:00
Laboratory Analy	rses;				*		
Container	Preservative	Holding	Time	Analys	is	8 2	
1 - 1 Liter Cubitainer	Field Filtered, HNO3 to pH<2	180	Days	1 Metals	- Dissol	ved, in Water by ICI	P/MS.
1 - 1 Liter Cubitainer	HNO3 to pH<2	180	Days			r by ICP/MS	
	NaOH to pH > 12	. 14.	Days	1 Cyanic	le, Total	in Water	*
1 - 1 Liter Cubitainer	NaOH to pH > 12	14	Days	1 Cyanic	ie, Total	- Dissolved in Wate	Г
1 - 1 Liter Cubitainer 1 - 1 Liter Cubitainer	neon to private	- 1					
1 - 1 Liter Cubitainer				4			

52404-3129

no treatment existery

Well Repth: 220 Pt

Prilled: 1993

They drink bottled water Sample Collected By: BM

4471 33rd

Cedar Rapids, IA

ASR Number: 4	997 Sample Number	7 QC Cod	de: Matrix: Water Tag	ID: 4997-7
City: Program:	BMCWDWSA CW Processing DW suppl Cedar Rapids Superfund Multi-Site - General		State: Iowa	Z Site OU: 00
Location Desc:	Outside spiget		treatment	
Expected Conc: Latitude: Longitude:	(or Circle One:	Low Medium Sample Coll	High) Date ection: Start: 7/20/10 End: 1/20/10	Time(24 hr) 19 ∞ 19 ∞
Laboratory An Container  1 - 1 Liter Cubitainer  1 - 1 Liter Cubitainer  1 - 1 Liter Cubitainer  1 - 1 Liter Cubitainer	Preservative Field Filtered, HNO3 to pH<2 HNO3 to pH<2 NaOH to pH >12	Holding Time 180 Days 180 Days 14 Days 14 Days	Analysis  1 Metals - Dissolved, in Water by Id  1 Metals in Water by ICP/MS  1 Cyanide, Total in Water  1 Cyanide, Total - Dissolved in Water	

(N/A)

4401 33rd Ane SW Ceder Rapids, IA 52404-3129

Well Depth: Unknown

Drilled: Unknown

ASR Number: 499	Sample Numbe	r: 8	QC Cod	le: M	atrix: Water Tag	<b>ID:</b> 4997-8
	W Processing DW supp	ly wells -		sessment	er: Brian Mitchell	
	edar Rapids			Sta	te: Iowa	B*
Program: Su Site Name: Mu	ulti-Site - General	ii .			Site ID: 07ZZ	Site OU: 00
Location Desc:	Jutside spiget 1	peline.	treatm	tnu	×	
		Externa	al Samp	le Number:		
Expected Conc:	(or Circle One	e: Low	Medium	High)	Date	Time(24 hr)
Latitude: _		Samp	ole Colle	ection: Star	t: 7/21/16	8:30
Longitude: _				En	d: 7/21/10	8:30
Laboratory Analy	/ses:				,	
Container	Preservative	Holding	Time	Analysis		
1 - 1 Liter Cubitainer	Field Filtered, HNO3 to pH<2	180	Days	1 Metals - Dis	ssolved, in Water by ICF	P/MS
1 - 1 Liter Cubitainer	HNO3 to pH<2	180	Days		ater by ICP/MS	
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide, To		
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide, To	otal - Dissolved in Water	r. 
Sample Comment	s:	SI.				
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<i>y</i>					*	
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	e 8	027	•	(A)	• •	
8	Well depth:	300A			* =:	×
	Drilled :	1960	(71,2)	e		, , e-
Sample Collected	Rv. BM				3	

ASR Number: 499	7 Sample Numbe	r: 9	QC Cod	le:	Matri	x: Water 1	ag ID:	4997-9	
_	CWDWSA Processing DW supp dar Rapids	ly wells -		sessment	_	Brian Mitch	ell		
Program: Sur	5. To 2. S. Og (T. ), A S. Og (S. ), 40,	9							
Site Name: Mu		E-				Site ID: 0	7ZZ <b>S</b> i	te OU:	00 .
Location Desc:	out side	spigo	+ pri	or to	50-	Hener		_	
*		Externa	l Samp	le Numb	er: _				
Expected Conc:	(or Circle One	: (Low)	Medium	High)		Date	1	Time(24	1 hr)
Latitude:		Samp	le Colle	ction: S	tart:	271/10		1:30	
Longitude:					End:	7/21/10	9	L:30	
Laboratory Analys									
Container  1 - 1 Liter Cubitainer	Preservative Field Filtered, HNO3 to	Holding 180	Time Days	Analysis  1 Metals -		ed, in Water b	y ICP/MS		* 1
12-1 Liter Cubitainer	pH<2 HNO3 to pH<2	180	Days			by ICP/MS			
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide					
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days			Dissolved in V	Vater		
Sample Comments	•		4		, ,	4			,
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t 24 2									

Sample Collected By: BM

Advisor.

ASR Number: 499	7 Sample Number:	10	QC Coc	de:	Matr	ix: Water Tag	ID: 4997-10
Project ID: BM			the second second second	-	ager:	Brian Mitchell	
	Processing DW supply dar Rapids	wells -	- Site As		tate:	Iowa	
Site Name: Mu		-				Site ID: 07Z	Z Site OU: 00
Location Desc:	uside prior to						12
A13.1	I	xtern	al Samp	le Numb	er: _		
Expected Conc:	(or Circle One:	Low	Medium	High)		Date	Time(24 h
Latitude:		Sam	ple Colle	ection: S		7/21/10	0.00
Longitude:	<del></del>				End:	7 121/10	10 10
Laboratory Analys	ses:		858				2.00
Container	Preservative	Holding	g Time	Analysis		(0)	
1 - 1 Liter Cubitainer	Field Filtered, HNO3 to	180	Days	1 Metals -	Dissol	ved, in Water by IC	CP/MS
1'- 1 Liter Cubitainer	pH<2 HNO3 to pH<2	180	Days	1 Metals i	n Wate	r by ICP/MS	7, 12 1 71.
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide	, Total	in Water	
1 - 1 Liter Cubitainer	NaOH to pH >12	14	Days	1 Cyanide	, Total	- Dissolved in Wat	er
Sample Comments	S:						
(N/A)	* a * * *					(82)	();;
n							**
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	10 1 max 01	C N. J					
3750	Westpost Rd	· w		<b>\</b>		01	
Cedar R	agids, JA 52404			1) Wate	r	softher	- ros ple
	*						
1.11					*	×	8 8

Sample Collected By: BM

Well Depth: 318 9+ Orilled: A62

· ·
ASR Number: 4997 Sample Number: 11 QC Code: Matrix: water Tag ID 4997-11
ASR Number: 49 Sample Number: 11 QC Code: Matrix: wa Tag ID 4997-11
Project Manager: Brian Mitchell
Project ID: B mcw Dw sA
Project Description: Cw Processing Dw supply wells - site assessment
City: Cedar Rapids
State: $\bot A$
Program: Super-fund
CERCLA Site Name: multi-site-General
CERCLA Site ID:
CERCLA Site Billing ID: Ø72208のの
CERCLA Site OU:
Location Description: in side tap , mo treatment
External Sample Number:
Expected Concentration: circle one (owmediumhigh)
Latitude:
Longitude:
Sample Collection Date/Time: 72110 / 10 30
Container Type: [-1 liter cub: ; HN 03+opH 22; 180 days: metal  Container Type: [-1 liter cub: ; HN 03+opH 22; 180 days: metals ICP/ms  Preservative: [-1 liter cub: ; NaOH +opH 212; 14days; Cyanide]
Container Type: 1-1 liter cub: HN D3+oph L2; 180 days; metals ICP/ms
Preservative: 1-1 hter coli, NaOH to pH 712; 14days; Cranide
Holding Time: [- IT+ Cr e-bi; HaOH topH712, 14 days; Cyanide D. 15.
Requested Analysis:
Sample Comments:
3800 West Post Road SW
Cedar Rapids, IA 52404
3800 West Post Road SW Cedar Rapids, IA 52404

sandpoint well; depth = 100; she drinks bottled water Brian Mitchell Sample Collected By:\_\_\_

## United States Environmental Protection Agency Region 7 901 N. 5th Street Kansas City, KS 66101

Date:

AUG 17 2010

Subject: Transmittal of Sample Analysis Results for ASR #: 4997

Project ID: BMCWDWSA

Project Description: CW Processing DW supply wells - Site Assessment

From: Michael F. Davis, Chief

Chemical Analysis and Response Branch, Environmental Services Division

r8/18/10-

To: Brian Mitchell

SUPR/EFLR

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the enclosed Customer Satisfaction Survey and Data Disposition/Sample Release memo for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Data Disposition/Sample Release memo.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

cc: Analytical Data File.

ASR Number: 4997

#### Summary of Project Information

08/17/2

Project Manager: Brian Mitchell

Org: SUPR/EFLR

Phone: 913-551-7633

Project ID: BMCWDWSA

Project Desc: CW Processing DW supply wells - Site Assessment

State: Iowa

Program: Superfund

Site Name: Multi-Site - General

Location: Cedar Rapids

Site ID: 07ZZ Site OU: 00

Purpose: Site Preliminary Assessment

GPRA PRC: 302DD2C

# Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose.

Units: Specific units in which results are

reported.

= Field Sample

mg/L = Milligrams per Liter ug/L = Micrograms per Liter

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

Number: 4997

#### **Sample Information Summary**

08/17/2010

Project ID: BMCWDWSA Project Desc: CW Processing DW supply wells - Site Assessment

Sample No		Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 -	_	Water	Outside spigot prior to RO system		07/20/2010	15:30	07/20/2010	15:30	07/22/2010
2 -	_	Water	After Reverse Osmosis Inside House		07/20/2010	15:30	07/20/2010	15:30	07/22/2010
3 -		Water	Outside spigot prior to RO system		07/20/2010	16:30	07/20/2010	16:30	07/22/2010
4 -		Water	After Reverse Osmosis Inside House		07/20/2010	16:30	.07/20/2010	16:30	07/22/2010
5 -		Water	Outside spigot prior to treatment		07/21/2010	16:30	07/21/2010	16:30	07/22/2010
6 -		Water	Outside spigot		07/20/2010	18:00	07/20/2010	18:00	07/22/2010
7 -		Water	Outside spigot prior to treatment	12	07/20/2010	19:00	07/20/2010	19:00	07/22/2010
8 -	_	Water	Outside spigot before treatment		07/21/2010	08:30	07/21/2010	08:30	07/22/2010
9 -	_	Water	Outside spigot prior to softener		07/21/2010	09:30	07/21/2010	09:30	07/22/2010
10 -	_	Water	Inside prior to treatment		07/21/2010	10:00	07/21/2010	10:00	07/22/2010
11 -		Water	Inside Tap = No treatment		07/21/2010	10:30			07/22/2010

ASR Number: 4997

#### **RLAB Approved Analysis Comments**

08/17/2010

Project ID: BMCWDWSA

Project Desc CW Processing DW supply wells - Site Assessment

ults For This Analysis	s
	ults For This Analysis

Cyanide, Total - Dissolved in Water

Lab: Region 7 ESAT Contract Lab (In-House)

Method: EPA Region 7 RLAB Method 3135.2J used to determine 'Total Dissolved' results.

Samples: 1-\_\_ 3-\_\_ 4-\_\_ 5-\_\_ 6-\_\_ 9-\_\_ 10-\_ 11-

Comments:

(N/A)

Cyanide, Total in Water

Lab: Region 7 ESAT Contract Lab (In-House)

Method: EPA Region 7 RLAB Method 3135.2J used to determine 'Total' results.

Samples: 1-\_\_ 3-\_\_ 4-9-10-\_\_ 11-\_\_

Comments:

(N/A)

Metals - Dissolved, in Water by ICP/MS

Lab: Region 7 ESAT Contract Lab (In-House)

Method: EPA Region 7 RLAB Method 3123.1C Applied to Field Filtered Samples for

"Dissolved" Results

Samples: 1-\_\_ - 3-\_ 10-\_\_

#### Comments:

Slight zinc (8.7) contamination was found in the laboratory method blank. Only samples containing this analyte at a level greater than ten times the contamination level of the blank are reported without being qualified. All samples that contained this analyte but at a level less than ten times the contamination in the blank have the result U-coded indicating that the reporting limit has been raised to the level found in the sample. Samples affected were: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11.

Metals in Water by ICP/MS

Lab: Region 7 ESAT Contract Lab (In-House)

Method: EPA Region 7 RLAB Method 3123.1C

Samples: 1-\_\_ 2-\_\_ 3-\_\_ 5-\_\_\_ 6-\_\_ 9-\_\_ 10-\_\_ 11-\_\_

Comments:

(N/A)

**RLAB Approved Sample Analysis Results** 

mber: 4997

08/17/2010

Project Desc: CW Processing DW supply wells - Site Assessment ct ID: BMCWDWSA

1	Analysis/ Analyte		Units	1	2	3	4
1	1 Cyanide, Total - Dissolved in Water						
	Cyanide		mg/L	0.0100 U	0.0100 U	0.0100 U	0.0100 U
1	1 Cyanide, Total in Water						
	Cyanide		mg/L	0.0100 U	0.0100 U	0.0100 U	0.0100 U
1	1 Metals - Dissolved, in Water by ICP/MS	i				112	
	Antimony		ug/L	2.0 U	2.0 U	2.0 U	2.0 U
	Arsenic		ug/L	3.4	1.0 U	7.6	1.0 U
	Barium		ug/L	68.8	5.0 U	51.6	5.0 U
	Beryllium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Cadmium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Chromium		ug/L	3.9	2.0 U	3.7	2.0 U
	Cobalt		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Copper		ug/L	4.9	4.6	2.0 U	9.7
	Lead		ug/L	1.0 U	1.0 U	1.6	1.0 U
	Manganese		ug/L	22.1	1.0 U	76.2	1.0 U
	Nickel		ug/L	3.0	1.0 U	3.4	1.0 U
	Selenium		ug/L	5.0 U	5.0 U	5.0 U	5.0 U
	Silver		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Thallium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Vanadium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Zinc		ug/L	18.4 U	7.7 U	4.4 U	3.2 U
1	Metals in Water by ICP/MS						
	Antimony		ug/L	2.0 U	2.0 U	2.0 U	2.0 U
	Arsenic	t.	ug/Ĺ	3.4	1.0 U	1.7	1.0 U
	Barium	•	ug/L	70.1	5.0 U	53.1	3.7
	Beryllium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Cadmium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Chromium		ug/L	2.0 U	2.0 U	2.0 U	2.0 U
	Cobalt		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Copper		ug/L	6.5	2.0 U	60.4	6.7
	Lead		ug/L	1.0 U	1.0 U	9.9	1.0 U
	Manganese		ug/L	23.5	1.0 U	22.6	1.0 U
	Nickel		ug/L	2.9	1.0 U	2.9	1.0 U
	Selenium		ug/L	5.0 U	5.0 U	5.0 U	5.0 U
	Silver		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Thallium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Vanadium		ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	Zinc		ug/L	17.9	2.0 U	28.0	7.8

ASR Number: 4997

# RLAB Approved Sample Analysis Results

08/1

Project ID: BMCWDWSA

Project Desc: CW Processing DW supply wells - Site Assessment

Analysis/ Analyte				7 1	
1	Units	5	6	7	8
1 Cyanide, Total - Dissolved in Water					4
Cyanide	mg/L	0.0100 U	0.0100 U	0.010011	
. 1 Cyanide, Total in Water	J.	0.0100 0	0.0100 0	0.0100 U	0.0100 U
Cyanide	mg/L	0.0100 U	0.0100 U	0.0100.11	
1 Metals - Dissolved, in Water by ICP/MS	130.0	0.0100	0.0100 0	0.0100 U	0.0100 U
Antimony	ug/L	2.0 U	2.0 U	2011	
Arsenic	ug/L	6.2	10.8	2.0 U	2.0 U
Barium	ug/L	50.8	5.0 U	2.9	1.0 U
Beryllium	ug/L	1.0 U	1.0 U	93.3	131
Cadmium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	ug/L	9.3	6.2	1.0 U	1.0 U
Cobalt	ug/L	1.0 U	1.0 U	4.1	4.1
Copper	ug/L	2.0 U		1.0 U	1.0 U
Lead	ug/L	1.0 U	14.5	2.0 U	2.0 U
Manganese	ug/L	30.7	1.0 U	1.0 U	1.0 U
Nickel	ug/L	9.7	1.0 U	35.4	27.0
Selenium	ug/L		1.0 U	11.1	2.2
Silver	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Thallium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Zinc	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1 Metals in Water by ICP/MS	ug/ L	34.8 U	25.4 U	13.4 U	2.6 U
Antimony	ug/l				
Arsenic	ug/L / ug/L	2.0 U	2.0 U	2.0 U	2.0 U
Barium		4.5	9.0	4.0	1.0 U
Beryllium	ug/L	54.4	5.0 U	99.8	137
Cadmium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Cobalt	ug/L	2.0 U	2.0 U	2.0 U	2.0 U
Copper	ug/L	1.0 U	1.0 U	1.1	1.0 U
Lead	ug/L	4.0	6.2	2.3	3.3
Manganese	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Nickel	ug/L	31.2	1.0 U	40.5	28:9
Selenium	ug/L	9.6	1.0 U	11.8	1.8
Silver	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Thallium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Zinc	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
	ug/L	31.9	11.7	14.2	2.6

**RLAB Approved Sample Analysis Results** 

08/17/2010

mber: 4997 ect ID: BMCWDWSA

Project Desc: CW Processing DW supply wells - Site Assessment

//ect 121 211				
Analysis/ Analyte	Units	9	10	11
Cyanide, Total - Dissolved in Water     Cyanide	mg/L	0.0100 U	0.0100 U	0.0100 U
1 Cyanide, Total in Water Cyanide	mg/L	0.0100 U	0.0100 U	0.0100 U
1 Metals - Dissolved, in Water by ICP/MS	ug/L	2.0 U	2.0 U	2.0 U
Antimony	ug/L	1.0 U	1.0 U	1.0 U
Arsenic	ug/L	121	130	242
Barium	ug/L	1.0 U	1.0 U	1.0 U
Beryllium	ug/L	1.0 U	1.0 U	1.0 U
Cadmium	ug/L	4.3	4.4	3.4
Chromium	ug/L	1.0 U	1.0 U	1.0 U
Cobalt	ug/L	3.6	2.0 U	2.0 U
Copper	ug/L	1.0 U	1.0 U	1.0 U
Lead	ug/L	24.1	14.4	294
Manganese	ug/L	1.9	1.9	2.4
Nickel	ug/L	5.0 U	5.0 U	5.0 U
Selenium	ug/L	1.0 U	1.0 U	1.0 U
Silver	. ug/L	1.0 U	1.0 U	1.0 U
Thailium	ug/L	1.0 U	1.0 U	1.0 U
Vanadium	ug/L	16.2 U	24.7 U	4.9 U
Zinc	ug/ L			
1 Metals in Water by ICP/MS	∠ ug/L	2.0 U	2.0 U	2.0 U
Antimony	y ug/⊨ ug/L	1.0 U	1.0 U	1.0 U
Arsenic	ug/L ug/L	124	136	259
Barium		1.0 U	1.0 U	1.0 U
Beryllium	ug/L	1.0 U	1.0 U	1.0 U
Cadmium	ug/L	2.0 U	2.0 U	2.0 U
Chromium	ug/L	1.0 U	1.0 U	1.0 U
Cobalt	ug/L	19.2	2.0 U	5.3
Copper	ug/L	1.0 U	1.0 U	2.4
Lead	ug/L	26.9	16.1	322
Manganese	ug/L	1.7	1.9	3.1
Nickel	ug/L	5.0 U	5.0 U	5.0 U
Selenium	ug/L	1.0 U	1.0 U	1.0 U
Silver	ug/L	1.0 U	1.0 U	1.0 U
Thallium	ug/L		1.0 U	1.0 U
Vanadium	ug/L	1.0 U	67.1	149
Zinc	ug/L	21.8	0/.1	145

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